REMARKS

Claims 1-7 are pending. By this Amendment, new claim 8 has been added. Accordingly, claims 1-8 would be pending upon entry of this amendment, with claim 1 being the sole pending claim in independent form.

Claims 1-3 were rejected under 35 U.S.C. § 103(a) as purportedly unpatentable over Fukuzawa (US 2001/0036526 A1). Claim 4 was rejected under 35 U.S.C. § 103(a) as purportedly unpatentable over Fukuzawa in view of Nishihara et al. (US 2003/0180473 A1).

Applicant respectfully submits that the present application is allowable over the cited art, for at least the reason that the cited art does not disclose or suggest the aspects of the present application of an optical recording medium configured for ***recording at a recording linear velocity of 27.9 m/s or more***, wherein the optical reflective layer comprises any one of Ag and an alloy mainly made from Ag and a x-ray diffraction spectrum of the optical reflective layer satisfies the following relational expression: $0.2 < I(200) / I(111) < 0.4$, wherein I (111) is an intensity of the x-ray diffraction peak from (111) plane and I (200) is an intensity of the x-ray diffraction peak from (200) plane determined by x-ray diffraction based on $\theta - 2\theta$ method when the incidence angle relative to the surface of the optically transparent substrate being θ.

As discussed in the present application, for example, at page 10, lines 2-8, such aspects of the present application facilitate the remarkable effects of a high reflectance while being more inexpensive than gold reflective layers, by eliminating the disadvantages that are frequently encountered with conventional types of reflective layers comprising Ag or and alloy mainly made from Ag, and more specifically, distortion of the waveform of a reproduced signal in recording properties and degradation of storage stability under conditions of high temperature

and humidity.

Fukuzawa, as understood by applicant, proposes a configuration of an optical recording medium including a recording layer comprising an organic dye, a reflecting layer composed of a metal, and a protective layer, in this order on a light-transmittable substrate, wherein the reflective layer is a thin film comprising silver as a major component and satisfying a relationship of I(200)/I(111)>0.40. More specifically, Fukuzawa, [0015], states as follows:

> [0015] Further, the present invention is a method for producing an optical recording medium which comprises at least a recording layer comprising an organic dye, a reflecting layer composed of a metal by a sputtering method, and a protective layer laminated in this order on a light-transmittable substrate, said method comprising the step of forming a thin film comprising silver as a major component and satisfying a relationship of ***I(200)/I(111)>0.40 when an X-ray diffraction intensity by a (111) plane is designated as I(111) and an X-ray diffraction intensity by a (200) plane is designated as I(200) in an X-ray diffraction spectrum measured by a θ-2θ method while an angle of incidence with reference to a surface of the light-transmittable substrate is set at θ***, by controlling a sputtering gas pressure in a sputtering chamber in forming the reflecting layer by the sputtering method.

It is contended in the Office Action that Fukuzawa contemplated the aspect of I(200) / I(111) < 0.4.

However, it is noted that Fukuzawa, [0052] (reproduced below), more than just contemplated but actually ***taught away*** from the feature of I(200) / I(111) < 0.4.

> [0052] On the other hand, according as the relative intensity ratio I(200)/I(111) decreases, the PI errors in particular among the characteristics of the optical recording medium tend to increase after the preservation under the high-temperature high-humidity environment as compared with the characteristics at the initial time. The PI errors are described in "DVD Specifications for Recordable Disc, Ver. 1.0, Part 1, Chapters 2.1.7.3 and 3.2". ***When the relative intensity ratio I(200)/I(111) is 0.40 or less, inconvenience during reproduction such as a mosaic is liable to occur in a commercially available DVD-Video player***.

Further, Fukuzawa, [0083] (reproduced below), states as follows:

> [0083] On the other hand, in Comparative Examples 1 to 3, a significant increase in the PI errors was seen after the high-temperature high-humidity preservation test, and there was a poor reproduction by a DVD-Video player.

Thus, Fukuzawa clearly indicates that it would ***NOT*** be desirable for an optical recording medium to have the property that a x-ray diffraction spectrum of the optical reflective layer of the optical recording medium satisfies the relation that $0.2 < I(200) / I(111) < 0.4$. More specifically, Fukuzawa **warns** that an optical recording medium with the property that a x-ray diffraction spectrum of the optical reflective layer of the optical recording medium satisfies the relation that $I(200) / I(111) < 0.4$ would have undesirable properties.

As the United States Supreme Court recently reiterated in the KSR case, such teaching away is relevant evidence and cannot be ignored in the patentability analysis.

In addition, although silver thin films having 0.38 and 0.24 as I(200)/I(111) were used in the Comparative Examples 1 and 2 of Fukuzawa, it should be noted that the statement of "0.38" and "0.28" are values of I(200)/I(111) in the optical reflecting layer obtained at the linear velocity of 3.5 m/sec. See Fukuzawa, [0067], [0078], [0079], which states that:

> Example 1
>
> ...
>
> [0067] With respect to the obtained optical recording medium, an EFM signal was recorded with the optimal recording laser power (Po) ***at a linear velocity of 3.5 m/sec*** ...
>
> ...
>
> Comparative Example 1
>
> [0078] An optical recording medium was produced in the same manner as in Example 1 ...
>
> Comparative Example 2
>
> [0079] An optical recording medium was produced in the same manner as in Example 1 ...

Applicant submits that the cited art (including Fukuzawa and Nishihara) does not disclose

or suggest the aforementioned aspects of the present application of an optical recording medium ***configured for recording at a recording linear velocity of 27.9 m/s or more***, wherein the optical reflective layer comprises any one of Ag and an alloy mainly made from Ag and a x-ray diffraction spectrum of the optical reflective layer satisfies the following relational expression: $0.2 < I(200) / I(111) < 0.4$, wherein I (111) is an intensity of the x-ray diffraction peak from (111) plane and I (200) is an intensity of the x-ray diffraction peak from (200) plane determined by x-ray diffraction based on $\theta - 2\theta$ method when the incidence angle relative to the surface of the optically transparent substrate being θ.

Further, applicant submits that one skilled in the art would NOT have been motivated to modify the optical recording medium proposed in Fukuzawa in order to obtain a modified optical recording medium having the properties of a x-ray diffraction spectrum of the optical reflective layer satisfying the inequality relation of $0.2 < I(200) / I(111) < 0.4$, ***at a recording linear velocity of 27.9 m/s or more***, since Fukuzawa teaches away from such aspects.

The cited art simply does NOT appreciate the aforementioned remarkable effects that can be obtained from the aforementioned aspects of the present application.

As discussed in connection with the Examples of the present application, especially in connection with Examples 1 to 3 (in which the x-ray diffraction spectrum was within the range of $0.2<I(200)/I(111)<0.4$), the recording properties were good (the bottom jitter was from 7.3% to 7.5% and Δ P/Po was from 0.15 to 0.16).

In contrast, the reliability of storage stability was high (10 to 15 before storing, and 29 to 93 after storing). In contrast, in the Comparative Examples 1 to 3 (in which the x-ray diffraction spectrum was not within the range of $0.2<I(200)/I(111)<0.4$), any one of the recording property

and the reliability of storage stability were worse than the results obtained with Examples 1 to 3 (in the Comparative Example 1, the PI error max value before storing was 12, and the value after storing was 588; in the Comparative Examples 2 and 3, the bottom jitter was 7.9% and 8.5%, and ΔP/Po was 0.13 and 0.10).

Applicant submits that the cited art, even when considered along with common sense and common knowledge to one skilled in the art, does ***NOT*** render unpatentable the aforementioned aspects of the present application.

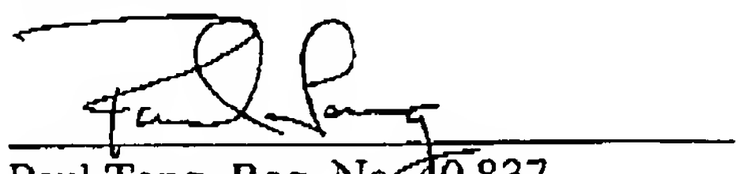
Accordingly, applicant respectfully submits that independent claim 1 and the claims depending therefrom are allowable over the cited art.

In view of the remarks hereinabove, applicant submits that the application is now allowable, and earnestly solicits the allowance of the application.

If a petition for an extension of time is required to make this response timely, this paper should be considered to be such a petition. The Patent Office is hereby authorized to charge any required fees in connection with this amendment, and to credit any overpayment, to our Deposit Account No. 03-3125.

If a telephone interview could advance the prosecution of this application, the Examiner is respectfully requested to call the undersigned attorney.

Respectfully submitted,



Paul Teng, Reg. No. 40,837
Attorney for Applicant
COOPER & DUNHAM LLP
Tel.: (212) 278-0400